

RRRRRRRR	MM	MM	333333	PPPPPPPP	RRRRRRRR	000000	BBBBBBBB	EEEEEEEE
RPRRRRRR	MM	MM	333333	PPPPPPPP	RRRRRRRR	000000	BBBBBBBB	EEEEEEEE
RR	RR	MMMM	MMMM	33	PP	RR	RR	00
RR	RR	MMMM	MMMM	33	PP	RR	RR	00
RR	RR	MM	MM	33	PP	RR	RR	00
RR	RR	MM	MM	33	PP	RR	RR	00
RRRRRRRR	MM	MM	33	PPPPPPPP	RRRRRRRR	00	00	BBBBBBBB
RRRRRRRR	MM	MM	33	PPPPPPPP	RRRRRRRR	00	00	BBBBBBBB
RR	RR	MM	MM	33	PP	RR	RR	00
RR	RR	MM	MM	33	PP	RR	RR	00
RR	RR	MM	MM	33	PP	RR	RR	00
RR	RR	MM	MM	33	PP	RR	RR	00
RR	RR	MM	MM	333333	PP	RR	RR	000000
RR	RR	MM	MM	333333	PP	RR	RR	000000

LL	IIIIII	SSSSSSSS
LL	IIIIII	SSSSSSSS
LL	II	SS
LLLLLLLL	IIIIII	SSSSSSSS
LLLLLLLL	IIIIII	SSSSSSSS

1 0001 0 MODULE RM3PROBE (LANGUAGE (BLISS32),
2 0002 0 IDENT = 'V04-000'
3 0003 0) =
4 0004 1 BEGIN
5 0005 1 *****
6 0006 1 *
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
9 0009 1 * DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.
10 0010 1 * ALL RIGHTS RESERVED.
11 0011 1 *
12 0012 1 * THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED
13 0013 1 * ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE
14 0014 1 * INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR ANY OTHER
15 0015 1 * COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY
16 0016 1 * OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY
17 0017 1 * TRANSFERRED.
18 0018 1 *
19 0019 1 * THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
20 0020 1 * AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT
21 0021 1 * CORPORATION.
22 0022 1 *
23 0023 1 * DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
24 0024 1 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
25 0025 1 *
26 0026 1 *
27 0027 1 *****
28 0028 1 **
29 0029 1 ++
30 0030 1 :
31 0031 1 : FACILITY: RMS32 Index Sequential File Organization
32 0032 1 :
33 0033 1 : ABSTRACT:
34 0034 1 : Subroutines to probe large structures
35 0035 1 :
36 0036 1 :
37 0037 1 : ENVIRONMENT:
38 0038 1 :
39 0039 1 : VAX/VMS Operating System
40 0040 1 :
41 0041 1 :--
42 0042 1 :
43 0043 1 :
44 0044 1 : AUTHOR: Wendy Koenig CREATION DATE: 11-JUL-78 11:27
45 0045 1 :
46 0046 1 :
47 0047 1 : MODIFIED BY:
48 0048 1 :
49 0049 1 : V03-003 MCN0001 Maria del C. Nasr 15-Mar-1983
50 0050 1 : Reorganize linkages
51 0051 1 :
52 0052 1 : V03-002 KBT0227 Keith B. Thompson 23-Aug-1982
53 0053 1 : Reorganize psects
54 0054 1 :
55 0055 1 : V03-001 KPL0001 Peter Lieberwirth 22-Mar-1982
56 0056 1 : Change probe length to 512 from 1024 since 1024 could hit
57 0057 1 : first page of three, last page of three, and omit middle.

```
58 0058 1 :  
59 0059 1 : V02-004 REFORMAT  
60 0060 1 :  
61 0061 1 :  
62 0062 1 :*****  
63 0063 1 :  
64 0064 1 LIBRARY 'RMSLIB:RMS';  
65 0065 1 :  
66 0066 1 REQUIRE 'RMSSRC:RMSIDXDEF';  
67 0131 1 :  
68 0132 1 : define default psects for code  
69 0133 1 :  
70 0134 1 PSECT  
71 0135 1 CODE = RMSRMS3(PSECT_ATTR);  
72 0136 1 PLIT = RMSRMS3(PSECT_ATTR);  
73 0137 1 :  
74 0138 1 : Linkages  
75 0139 1 :  
76 0140 1 LINKAGE  
77 0141 1 L_JSB;  
78 0142 1 :  
79 0143 1
```

```
81 0144 1 GLOBAL ROUTINE RMSNOREAD_LONG (SIZE, ADDR, MODE) : RL$JSB =
82 0145 1 !++
83 0146 1 !++
84 0147 1 !++
85 0148 1 !++ FUNCTIONAL DESCRIPTION:
86 0149 1 !++ subroutine to perform a long or short probe
87 0150 1 !++ CALLING SEQUENCE:
88 0151 1 !++ bsbw rm$noread_long (size,addr,mode)
89 0152 1 !++ INPUT PARAMETERS:
90 0153 1 !++ size of structure to be probed
91 0154 1 !++ address of structure to be probed
92 0155 1 !++ mode to do probing in
93 0156 1 !++ IMPLICIT INPUTS:
94 0157 1 !++ none
95 0158 1 !++ OUTPUT PARAMETERS:
96 0159 1 !++ none
97 0160 1 !++ IMPLICIT OUTPUTS:
98 0161 1 !++ none
99 0162 1 !++ ROUTINE VALUE:
100 0163 1 !++ 0 if structure is readable
101 0164 1 !++ 1 if structure is NOT readable
102 0165 1 !++ (values are such since action is taken if the structure
103 0166 1 !++ is not readable and so the code looks cleaner)
104 0167 1 !++ SIDE EFFECTS:
105 0168 1 !++ none
106 0169 1 !-- BEGIN
107 0170 2 LOCAL
108 0171 2 LEN,
109 0172 2 START:
110 0173 2 IF .SIZE<0, 16> LEQU 512
111 0174 2 THEN
112 0175 2 RETURN
113 0176 2
114 0177 2 IF PROBER(MODE, SIZE, .ADDR)
115 0178 2 THEN
116 0179 2 0
117 0180 2 ELSE
118 0181 2 1;
119 0182 2
120 0183 2 ! need to do long probe
121 0184 2
122 0185 2
123 0186 2
124 0187 2
125 0188 2
126 0189 2
127 0190 2
128 0191 2
129 0192 2
130 0193 2
131 0194 2
132 0195 2
133 0196 2
134 0197 2
135 0198 2
136 0199 2
137 0200 2 START = .ADDR;
138 0201 2 LEN = .SIZE;
```

```

138 0201 2 DO
139 0202 2      BEGIN
140 0203 2
141 0204 2      IF NOT PROBER(MODE, LEN, .START)
142 0205 2      THEN
143 0206 2          RETURN 1;
144 0207 2
145 0208 2      START = .START + 512;
146 0209 2      LEN = .LEN - 512;
147 0210 2      END
148 0211 2      UNTIL .LEN LSS 1;
149 0212 2
150 0213 2      RETURN 0
151 0214 2
152 0215 1      END;

```

```

.TITLE RM3PROBE
.IDENT \V04-000\

```

```
.PSECT RMS$RMS3,NOWRT, GBL, PIC,2
```

	0200	8F	04	AE	B1 00000 RMS\$NOREAD LONG::			
08	BE	04	AE	0C	0B 1A 00006	CMPW	SIZE, #512	: 0186
					AE 0C 00008	BGTRU	1\$	
					0D 13 0000F	PROBER	MODE, SIZE, @ADDR	: 0190
					1B 11 00011	BEQL	3\$	
61		50	04	AE	7D 00013 1\$:	BRB	5\$	
		50	0C	AE	0C 00017 2\$:	MOVQ	SIZE, LEN	: 0199
					04 12 0001C	PROBER	MODE, LEN, (START)	: 0204
		50	01	AE	00 0001E 3\$:	BNEQ	4\$	
					05 00021	MOVL	#1, R0	: 0206
		51	0200	C1	9E 00022 4\$:	RSB		
		50	FE00	C0	9E 00027	MOVAB	512(R1), START	: 0208
					E9 14 0002C	MOVAB	-512(R0), LEN	: 0209
					50 D4 0002E 5\$:	BGTR	2\$: 0211
					05 00030	CLRL	R0	: 0213
						RSB		: 0215

: Routine Size: 49 bytes, Routine Base: RMS\$RMS3 + 0000

: 153 0216 1

```
155 0217 1 GLOBAL ROUTINE RM$NOWRT_LONG (SIZE, ADDR, MODE) : RL$JSB =
156 0218 1
157 0219 1 !++
158 0220 1
159 0221 1 | FUNCTIONAL DESCRIPTION:
160 0222 1 | subroutine to perform a long or short probe
161 0223 1 | CALLING SEQUENCE:
162 0224 1 | bsbw rm$nowrite_long (size,addr,mode)
163 0225 1 | INPUT PARAMETERS:
164 0226 1 | size of structure to be probed
165 0227 1 | address of structure to be probed
166 0228 1 | mode to do probing in
167 0229 1 | IMPLICIT INPUTS:
168 0230 1 | none
169 0231 1 | OUTPUT PARAMETERS:
170 0232 1 | none
171 0233 1 | IMPLICIT OUTPUTS:
172 0234 1 | none
173 0235 1 | ROUTINE VALUE:
174 0236 1 | 0 if structure is writeable
175 0237 1 | 1 if structure is NOT writeable
176 0238 1 | (values are such since action is taken if the structure
177 0239 1 | is not writeable and so the code looks cleaner)
178 0240 1 | SIDE EFFECTS:
179 0241 1 | none
180 0242 1 | !--
181 0243 1 | BEGIN
182 0244 1 | LOCAL
183 0245 1 | LEN,
184 0246 1 | START;
185 0247 1 | IF .SIZE<0, 16> LEQU 512
186 0248 1 | THEN
187 0249 1 | | RETURN
188 0250 1 | | IF PROBEW(MODE, SIZE, .ADDR)
189 0251 1 | | THEN
190 0252 1 | | | 0
191 0253 1 | | | ELSE
192 0254 1 | | | | 1;
193 0255 1 | | |
194 0256 1 | | |
195 0257 1 | | |
196 0258 1 | | |
197 0259 1 | | |
198 0260 1 | | |
199 0261 1 | | |
200 0262 1 | | |
201 0263 1 | | |
202 0264 1 | | |
203 0265 1 | | |
204 0266 1 | | |
205 0267 1 | | |
206 0268 1 | | |
207 0269 1 | | |
208 0270 1 | | |
209 0271 1 | | |
210 0272 1 | | |
211 0273 1 | | | need to do long probe
211 0273 1 | | | LEN = .SIZE;
211 0273 1 | | | START = .ADDR;
```

```

212 0274 2 DO
213 0275 2 BEGIN
214 0276 2
215 0277 2 IF NOT PROBEW(MODE, LEN, .START)
216 0278 2 THEN
217 0279 2     RETURN 1;
218 0280 2
219 0281 2     START = .START + 512;
220 0282 2     LEN = .LEN - 512;
221 0283 2     END
222 0284 2     UNTIL .LEN LSS 1;
223 0285 2
224 0286 2     RETURN 0
225 0287 2
226 0288 1 END;

```

		0200	8F	04	AE	B1 00000 RMSNOWRT LONG::			
				0C	0B	1A 00006	CMPW	SIZE, #512	0259
08	BE	04	AE	0C	AE	0D 00008	BGTRU	1\$	
				0D	13	0000F	PROBEW	MODE, SIZE, @ADDR	0263
				1B	11	00011	BEQL	3\$	
				AE	7D	00013 1\$:	BRB	5\$	
		61		50	04	0D 00017 2\$:	MOVQ	SIZE, LEN	0271
				50	0C	AE 0001C	PROBEW	MODE, LEN, (START)	0277
				04	01	0001E 3\$:	BNEQ	4\$	
				50	05	00021	MOVL	#1, R0	0279
				51	0200	C1 9E 00022 4\$:	RSB		
				50	FE00	C0 9E 00027	MOVAB	512(R1), START	0281
						E9 14 0002C	MOVAB	-512(R0), LEN	0282
						50 D4 0002E 5\$:	BGTR	2\$	0284
						05 00030	CLRL	R0	0286
							RSB		0288

: Routine Size: 49 bytes. Routine Base: RMSRMS3 + 0031

```

227 0289 1
228 0290 1 END
229 0291 1
230 0292 0 ELUDOM

```

PSECT SUMMARY

Name	Bytes	Attributes
RMSRMS3	98	NOVEC,NOWRT, RD , EXE,NOSHR, GBL, REL, CON, PIC,ALIGN(2)

Library Statistics

File	-----	Symbols	-----	Pages	Processing
	Total	Loaded	Percent	Mapped	Time
\$_\$255\$DUA28:[RMS.OBJ]RMS.L32;1	3109	2	0	154	00:00.4

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LISS:RM3PROBE/OBJ=OBJ\$:RM3PROBE MSRC\$:RM3PROBE/UPDATE=(ENH\$:RM3PROBE)

Size: 98 code + 0 data bytes
Run Time: 00:03.4
Elapsed Time: 00:13.1
Lines/CPU Min: 5229
Lexemes/CPU-Min: 6394
Memory Used: 31 pages
Compilation Complete

0327 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
CONFIDENTIAL AND PROPRIETARY

RM3PROBE
LTS

RM351DXSP
LTS

RM3PUTERR
LTS

RM35PLUDR
LTS

RM3PUTUPO
LTS

RM3RRU
LTS

RM3ROOT
LTS

RM3PUT
LTS